

TECH ARTICLE # T002

The Complete Brake Job – A Step by Step Approach

What are the different aspects for a complete brake job? It must be remembered that simply replacing the pads and shoes may be more cost effective for the car owner but the most important consideration is providing the maximum safety in operating the motor vehicle. A complete brake job will also drastically reduce the percentage of comebacks or complaints for the installer. The initial stage of this process is a comprehensive inspection of the brake system which should include a road test, if possible. The ensuing stages of a brake job can be defined as a series of steps which are as follows:

1. Replace the front disc pads.
2. Replace the rear shoes (or pads)
3. Turn or replace the rotor (or drums). It is critical with this operation to always make sure that you do not exceed manufacturers' specifications for Scrap Thickness. The best results are achieved when a non-directional finish is applied to the rotor surface after turning.
4. Inspect all wheel bearings, races, and seals.
5. Replace brake hardware and springs. This is critical as loose pads reduce brake effectiveness and can contribute to brake noise.
6. Rebuild or replace callipers. Today's brake systems operate at higher temperatures than in the past and can easily deteriorate boots and seals. Additional dirt and corrosion can build up on the piston. These factors could cause noise, brake drag, or leakage around the piston seals.
7. Rebuild or replace wheel cylinders. As rear shoes wear, dirt and corrosion can build on the cylinder cups. This can cause leaks which will likely contaminate the new brake shoes.
8. Replace the master cylinder. This is only required if during the initial inspection it is determined that the master cylinder is not operating in a smooth and proper manner.
9. Inspect all brake hoses. Replace them if there are any leaks or if the outer casing is cracked.
10. Inspect all steel brake lines. Check for leaks, corrosion, or kinks and replace if necessary.
11. Drain and replace brake fluid. Brake fluid will absorb and retain moisture from the air. This moisture will lower the fluid's boiling point and will promote corrosion in wheel cylinders and master cylinders.
12. Inspect parking brake cables. Ensure the cables are not "frozen" and lubricate or replace if necessary.
13. Check the brake light actuation. Replace or adjust the brake light switch.
14. Check tyre pressure.

After these steps are completed it is imperative that the vehicle be road tested to ensure proper function of the entire brake system. Steps 5 through 14 are not always considered when doing a "fast" brake job but by informing the customer of their benefits you have greatly reduced the potential for serious problems in the future for them and for you.

Technical Support
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